HDMI to Composite / S-Video Scaler

EXT-HDMI-2-COMPSVIDSN

User Manual

www.gefen.com

ASKING FOR ASSISTANCE

Technical Support:
Telephone (818) 772-9100
(800) 545-6900

Fax (818) 772-9120

Technical Support Hours:
8:00 AM to 5:00 PM Monday through Friday, Pacific Time

Write To:

Gefen, LLC
c/o Customer Service
20600 Nordhoff St
Chatsworth, CA 91311

www.gefen.com
support@gefen.com

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CONTENTS

INTRODUCTION.....1
Important Operating Notes.....2
Features.....3
Package Includes.....3
Panel Layout.....4
Panel Descriptions.....5
CONNECTING THE HDMI TO COMPOSITE / S-VIDEO SCALER.....6
Connections.....6
Wiring Diagram.....6
OPERATING THE HDMI TO COMPOSITE / S-VIDEO SCALER.....7
Using Overscan and Underscan.....7
Over Scan.....7
Under Scan.....8
Audio Output and Formats.....9
APPENDIX.....10
Firmware Update Procedure.....10
Specifications.....11
WARRANTY.....12

INTRODUCTION

Congratulations on your purchase of the HDMI to Composite / S-Video Scaler. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

The GefenTV HDMI to Composite / S-Video Scaler

Convert any Hi-Def source to standard definition NTSC/PAL format with scaling. The HDMI to analog video scaler accommodates resolutions up to 1080p Full HD video and supports scaled outputs in Composite and S-Video, while maintaining the original aspect ratio for optimal viewing. The coax S/PDIF digital audio and left/right analog audio outputs allow the audio extracted from the HDMI signal to be sent to any A/V Receiver or audio amplifier. Underscan/Overscan and NTSC/PAL switches help assure compatibility with a variety of analog televisions. This scaler also features a USB port for firmware upgrades.

How It Works

Using the included HDMI cable, connect the Hi-Def source to the HDMI input. Use a composite or S-video cable to connect the scaler to the analog monitor. Connect the scaler to an A/V Receiver or amplifier using an S/PDIF cable or an analog audio stereo patch cord with RCA connectors. Connect the power supply to the scaler and to an available electrical outlet. Power on all connected components. Use the NTSC/PAL switch on the scaler to select the correct output format for your TV. Select Underscan or Overscan using the slide switch on the scaler to compensate for scanning characteristics of your analog TV that could result in over-cropping of the image or visible black borders.

NOTE: HDCP encrypted HDMI sources are not supported by this device. If HDCP content is used, then the outgoing video signal will result in a black screen.

Important Operating Notes

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE HDMI TO COMPOSITE / S-VIDEO SCALER

- The HDMI To Composite/S-Video Scaler converts HDTV input resolutions of 480p@50 / 60Hz, 576p@50 / 60Hz, 480i@50 / 60Hz, 576i@50 / 60Hz, 720p@50 / 60Hz, 1080i and 1080p at 50/60Hz to either NTSC 480i or PAL 576i.
- Supported PC input resolutions include 640x480@60Hz, 800x600@60Hz, 1024x768@60Hz, 1280x1024@60Hz, 1600x1200@60Hz, and 1920x1200@60Hz.
- Both the digital and analog audio outputs are active at all times when using 2-channel LPCM. The HDMI To Composite / S-Video Scaler will not down-mix multi-channel digital audio formats to 2 channel analog stereo. See page 9 for more information.
- This device supports both NTSC and PAL video standards. This device maintains the aspect ratio of the original signal.
- Please be sure to set the proper output format for your television. NTSC 60Hz is commonly used in the United States and Japan, while PAL 50Hz is commonly used in European countries. Using the improper format will result in a unrecognizable picture and may damage your TV set.
- The HDMI To Composite/S-Video Scaler is HDMI 1.2 Compliant.
- HDCP encrypted HDMI sources are not supported by this device. If HDCP content is used, then the outgoing video signal will result in a black screen.

INTRODUCTION

Features

- HDMI to Composite / S-Video conversion plus scaling
- HDMI pass-through
- Supports 480i to 1080p HDMI input resolutions at 50/60 Hz.
- Outputs 480i / 576i signal for Composite/S-Video Display devices
- Supports both NTSC and PAL formats

Package Includes

(1) HDMI To Composite / S-Video Scaler
(1) 6 ft. HDMI Cable (M-M)
(1) 5V DC Power Supply
(1) Quick-Start Guide

Panel Layout

Panel Descriptions

1 L/R

Connect two RCA-type cables from these outputs to the display, audio amplifier, or receiver. Only 2 channel LPCM from the HDMI input can be passed to these outputs. Multi-channel bit-stream such as Dolby Digital will not be passed to this output.

2 Composite

Connect an RCA-type cable from this output to the Composite input on the display or A/V receiver.

3 S-Video

Connect an S-Video cable between this output and the S-Video input on the display or A/V receiver.

4 Coax Out

Connect an RCA-type cable from this output to the S/PDIF connector on a receiver or audio amplifier.

5 PAL / NTSC

Switches between NTSC (60Hz) and PAL (50Hz) output. Make sure that you use the proper output for the television. Using the wrong format will result in a unrecognizable picture and may damage your television.

6 Under Scan / Over Scan

Most analog television sets were designed to accept an over-scanned signal. If the resulting video signal displays a black border around the edges, then set this switch to Over Scan. If the resulting video signal is stretched beyond the edge of the display, then set this switch to Under Scan.

7 HDMI In

Connect an HDMI cable from the Hi-Def source to this connector.

8 USB

Used to upgrade the firmware. See page 10 for information on upgrading the firmware.

9 5V DC

Connect the included 5V DC power supply to this receptacle.

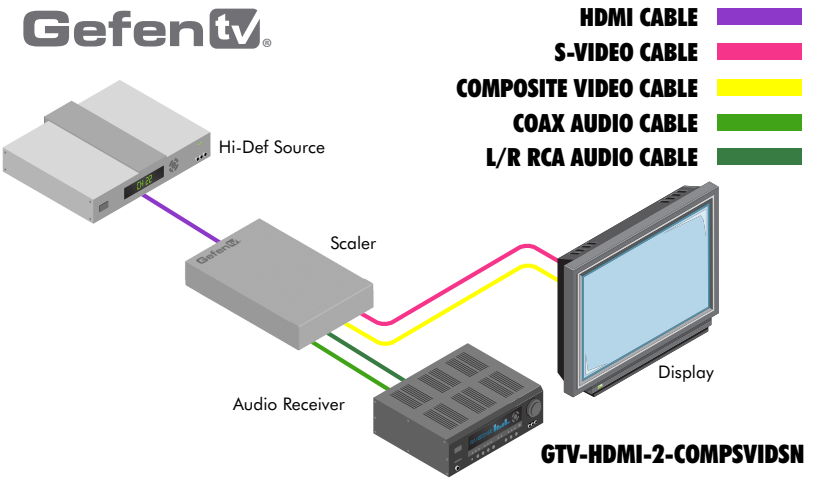
10 Power

This LED will glow bright blue once the included power supply is connected between the scaler and an available electrical outlet.

Connections

1. Connect the included HDMI cable between the Hi-Def source and the HDMI In connector on the scaler.
2. Connect an S-Video cable from the scaler to the display or an A/V receiver. Alternately or additionally connect a Composite cable (RCA-type) between the scaler and the Composite input on the display or A/V receiver.
3. Connect two RCA-type cables (usually part of the Composite cable) between the L and R connectors on the scaler and the L and R connectors on the display or A/V receiver.
4. Connect the included 5V DC power supply to the power receptacle on the scaler and connect the power cord to an available electrical outlet.

Wiring Diagram for the HDMI to Composite / S-Video Scaler



Using Overscan and Underscan

Once the *HDMI to Composite / S-Video Scaler* is connected and powered, the content from the Hi-Def source should be displayed.

Over Scan

If the video signal displays a black border around the edges of the picture, then set the **Under Scan / Over Scan** switch to the **Over Scan** position to correct the image.

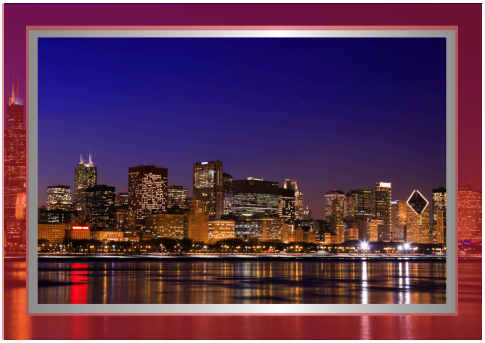
Example of an image with *underscan*

Corrected image using *overscan*

Under Scan

If the video signal extends beyond the edge of the display (shown in red), then set the **Under Scan / Over Scan** switch to the **Under Scan** position to correct the image.

Over-scanned image (exaggerated)



Corrected image using *underscan*

Audio Output and Formats

Both the digital (Coax Out) and analog (L/R) audio outputs are active at all times. Only 2-channel LPCM is supported on the output. See the table, below.

		Output	
		Coax Out	L/R Out
Input Format	Dolby Digital / DTS	YES	NO
	Multichannel LPCM	NO	NO
	2-Channel LPCM	YES	YES

Firmware Update Procedure

1. Download the firmware update from the Support section of the Gefen Web site.

2. Power-OFF the *HDMI to Composite / S-Video Scaler*.

   It is unnecessary to disconnect any cables from the *HDMI to Composite / S-Video Scaler* during the update process.

   IMPORTANT: The *HDMI to Composite / S-Video Scaler* must be POWERED OFF before connecting the USB cable to the computer.

3. Connect a USB cable between the computer and the *HDMI to Composite / S-Video Scaler*.

4. Power-ON the *HDMI to Composite / S-Video Scaler* by connecting the power.

5. Once the computer is able to connect to the *HDMI to Composite / S-Video Scaler*, a Removeable disk icon will be displayed

6. Extract the firmware file from the .ZIP file and drag the .bin file to the Removable Disk.

7. Disconnect the USB cable from the computer.

8. The firmware update process is complete.

APPENDIX

Specifications

Horizontal Frequency Range	31 - 70 kHz
Vertical Frequency Range	50 - 60 kHz
A/V Input	(1) HDMI Type A, 19-pin female
Video Outputs	(1) Composite RCA / (1) S-Video
Audio Outputs	(2) RCA-type, (1) S/PDIF
Power Consumption	7.5 Watts (max.)
Power Supply	5V / 2.6A DC
Shipping Weight	4 lbs (1.8 kg)

WARRANTY

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.

2. Customers outside the US are responsible for shipping charges to and from Gefen.

3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at www.gefen.com.

PRODUCT REGISTRATION

Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.

Rev A1

20600 Nordhoff St., Chatsworth CA 91311

1-800-545-6900 818-772-9100 fax: 818-772-9120

www.gefen.com support@gefen.com

This product uses UL or CE listed power supplies.